

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims:

1. (Previously presented) A method of defining printer media and inking intensity compatibility in a printing system comprising the steps of:
 - identifying a printer employing specified color inks for use in color printing, and identifying a color substrate for use in color printing;
 - printing a color test pattern of a plurality of test patches on the identified substrate, with the identified printer;
 - generating a tone scale curve for each color ink in the color test pattern, using the plurality of test patches;
 - selecting one limiting condition that controls color ink and color substrate compatibility for the identified printer and the identified substrate;
 - determining an upper ink limit for the identified substrate based on ink and substrate parameters in accordance with the one limiting ink condition;
 - and
 - using the upper ink limit to generate a tone scale to calibrate any ink color employed by the identified printer for printing on the identified substrate.
2. (Previously Presented) A method as claimed in claim 1 wherein the step of generating a tone scale curve comprises the steps of:
 - measuring the color test pattern in L*a*b* color space referenced from substrate color; and
 - using Euclidian distance from the substrate color as a measure of color intensity.
3. (Original) A method as claimed in claim 2 further comprising the steps of:

fitting a curve to the L*a*b* data plot defined by the substrate color;
linearly increasing applied ink level to a specified upper ink limit ;
and
deriving a corresponding one dimensional transform that will operate on imaging data to force the imaging data to conform to a predetermined data.

4. (Original) A method as claimed in claim 3 further comprising the step of generating a transfer function that produces a linear relationship from the substrate color to a maximum ink limit in L*a*b* color space.

5. (Original) A method as claimed in claim 1 wherein the plurality of test patches linearly increase in applied inking level over an entire dynamic range of the printing system.

6. (Original) A method as claimed in claim 1 further comprising the step of using a spectrophotometer to scan the color test pattern to determine a three-dimensional color coordinate of each of the plurality of test patches and the substrate.

7. (Original) A method as claimed in claim 1 wherein the step of determining an upper ink limit comprises the steps of:

determining a first upper ink limit for preferred color text;
determining a second upper ink limit for graphics.

8. (Canceled)

9. (Previously Presented) A method as claimed in claim 7 wherein the upper ink limit of each ink color in a printing is derived from a subjective determination of the total upper ink limit.

10. (Original) A method as claimed in claim 1 wherein the upper ink limit of each ink color in a printing used for graphics is derived from a subjective determination of the total upper ink limit.

11. (Original) A method as claimed in claim 1 wherein the upper ink limit of each of the colors in a printing for text is derived from the subjective determination of the total upper ink limit for the preferred text color.

12. (Canceled)

13. (Original) A method as claimed in claim 1 wherein the color test pattern comprises a test pattern containing image and graphics data that brackets a usable range of ink loading over a range of acceptable substrates for color printing operations to determine a suitable upper ink limit on a particular substrate.

14. (Currently amended) A method of defining printer media and inking intensity compatibility in a printing system comprising the steps of:

identifying a printer having a plurality of inks and a substrate for use in color printing;

printing a color test pattern with the identified printer and the identified substrate;

employing a portion of the color test pattern for generating a tone curve for each of the plurality of inks;

employing a portion of the color test pattern for determining the threshold for excessive ink coverage for the identified printer and substrate; and

re-calibrating a range of tone scale to remain below the threshold of excessive ink coverage for the plurality of inks on the identified substrate, wherein the color test pattern comprises a pattern which identifies when one of ink bleed is excessive, ink drying time is excessive, ink bleed through is excessive, and paper curl is excessive, due to ink coverage exceeding the threshold for excessive ink coverage.

15. (Original) A method of defining printer media and inking intensity compatibility in a printing system as claimed in claim 14 wherein the test pattern comprises sub patterns printed with increasing ink coverage levels for identifying the threshold for excessive ink coverage.

16. (Original) A method of defining printer media and inking intensity compatibility in a printing system as claimed in claim 15 wherein the increasing ink coverage levels span a range of thresholds for excessive ink coverage for a variety of substrates.

Claims 17 – 27 (Canceled).